

# Cognitive Fusion Mediates the Relation of Cognitive Anxiety Sensitivity and Rumination in **Undergraduate College Students** Jacey L. Anderberg, Lucas D. Baker, Emily A. Kalantar, & Christopher R. Berghoff

# Introduction

- Rumination is associated with reduced academic performance and increased student distress.<sup>1</sup>
- Cognitive anxiety sensitivity (AS) is positively associated with ruminative behavior.<sup>2</sup>
- Experiential avoidance and limited goal-directed behavior may be factors that maintain the cognitive AS-rumination relation.<sup>3</sup>
- Cognitive fusion may be an additional factor, as becoming entangled with, and surrendering behavioral control to, one's anxious thoughts may lead to increased awareness of such cognition.<sup>4</sup>
- Cognitive fusion is related to AS and psychological distress, suggesting it may be a mediating factor.<sup>5</sup>

### **PRESENT HYPOTHESIS**

The relation of cognitive AS and rumination will be indirectly accounted for by cognitive fusion.

### Method

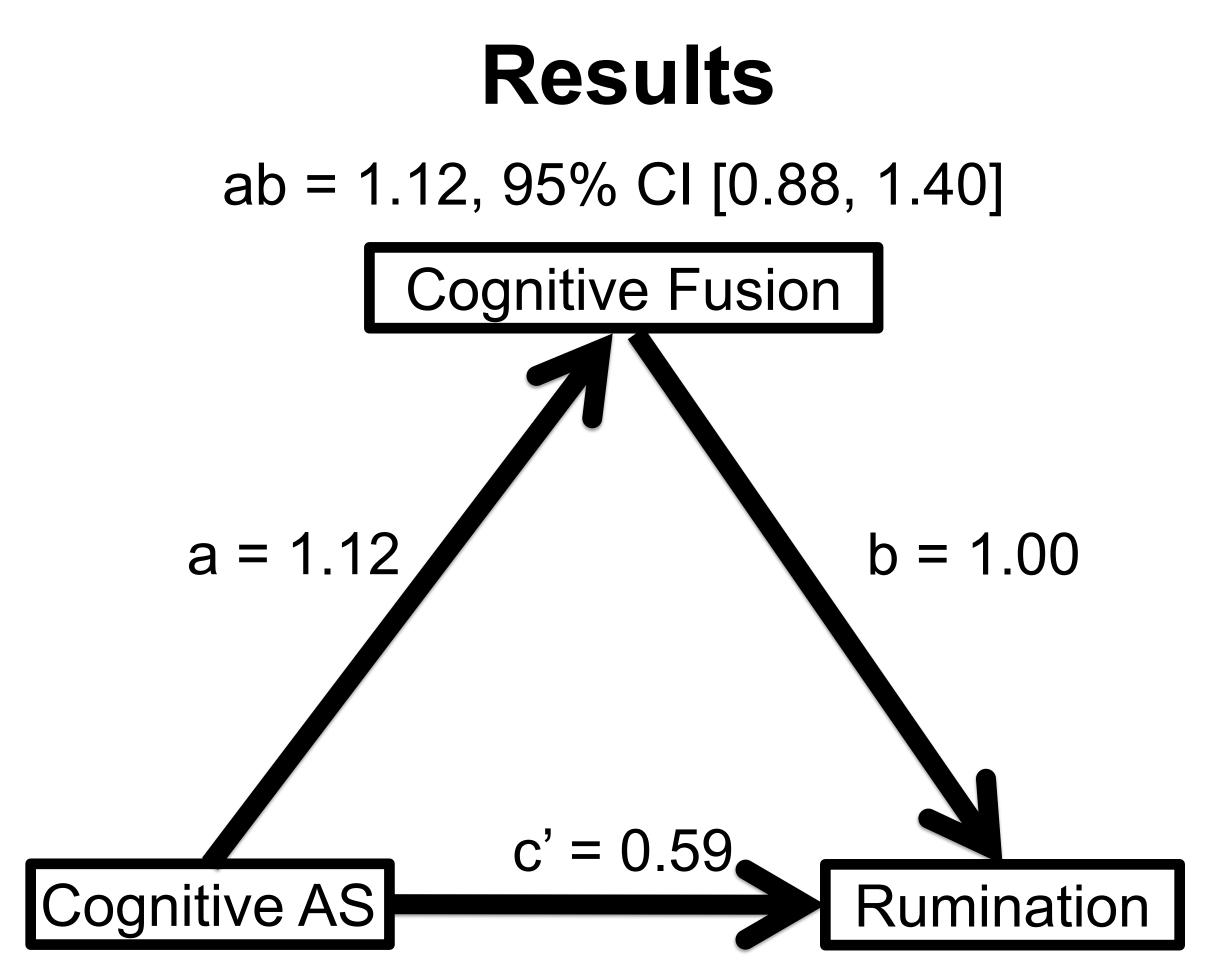
### **Participants**

- *N* = 237 undergraduate college students
- *M<sub>age</sub>* = 19.50, *SD* = 2.41; 77.6% Female; 94.1% White

#### Procedure

Participants completed an online survey battery.

- Ruminative Response Scale<sup>6</sup>,  $\alpha$  = 0.96
- Anxiety Sensitivity Index-3<sup>7</sup>
- Cognitive Subscale,  $\alpha = 0.91$
- Cognitive Fusion Questionnaire<sup>8</sup>,  $\alpha = 0.95$



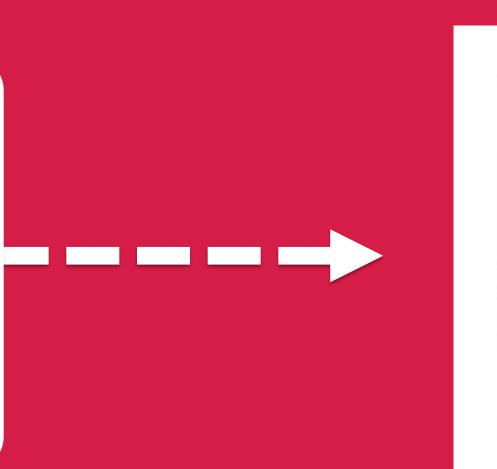
*Note.* Figure displays indirect association of Cognitive Anxiety Sensitivity and Rumination via Cognitive Fusion. All relations shown are statistically significant, ps < .001. Cognitive AS = Cognitive Anxiety Sensitivity.

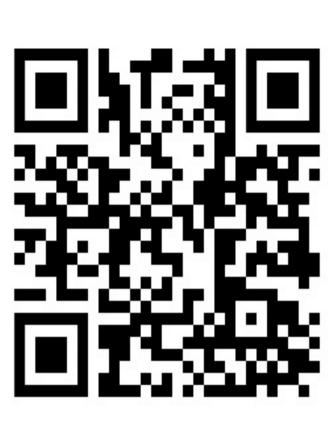
# The relation of cognitive anxiety sensitivity and rumination is partially accounted for by cognitive

Take a picture for more details & contact information



University of South Dakota





Des \_\_\_\_\_ Var \_\_\_\_\_ 1. ( 2. ( 3. F \_\_\_\_\_ Mea SD

> cognitive AS and rumination. • Cognitive fusion accounted for over half the relation of cognitive AS and rumination. Cognitive fusion may be an effective therapeutic target to reduce rumination that occurs as a result of cognitive AS.

• More representative samples • Evaluation within clinical or otherwise distressed samples who struggle with rumination

Longitudinal and experimental designs

. Morrison, R. & O'Connor, R. C. (2004). Predicting psychological distress in college students: The role of rumination and stress. Journal of Clinical Psychology, 61(4), 447-460. https://doi.org/10.1002/jclp.20021 2. Brown, H. M., Meiser-Stedman, R., Woods, H., & Lester, K. J. (2014). Cognitive vulnerabilities for depression and anxiety in childhood: Specificity of anxiety sensitivity and rumination. Behavioural and Cognitive Psychotherapy, 44(01), 30-42. https://doi.org/10.1017/s1352465814000472 3. Tull, M. T. & Gratz, K. L. (2008). Further examination of the relationship between anxiety sensitivity and depression: The mediating role of experiential avoidance and difficulties engaging in goal-directed behavior when distressed. Journal of Anxiety *Disorders, 22*(2), 199–210. https://doi.org/10.1016/j.janxdis.2007.03.005

Depression: Cognitive Mechanisms and Brain Networks. Clinical Psychological Science, 6(6). https://doi.org/10.1177/2167702618797935 5. Bardeen, J. R. & Fergus, T. A. (2016). The interactive effect of cognitive fusion and experiential avoidance on anxiety, depression, stress and posttraumatic stress symptoms. Journal of Contextual Behavioral Science, 5(1), 1-6. https://doi.org/10.1016/j.jcbs.2016.02.002

6. Nolen-Hoeksema, S. & Morrow, J. (1991). A prospective study of depression and posttraumatic stress symptoms after a natural disaster: The 1989 Loma Prieta earthquake. Journal of Personality and Social Psychology, 61(1), 115–121. https://doi.org/10.1037/0022-3514.61.1.115



### Results

| riable           | 1     | 2     | 3    |
|------------------|-------|-------|------|
| Cog AS           | -     |       |      |
| Cognitive Fusion | 0.60* | -     |      |
| Rumination       | 0.62* | 0.80* | -    |
| an               | 5.07  | 24.7  | 45.3 |
|                  | 5.68  | 10.6  | 15.8 |

*Note*. *N* = 237. Cog AS = Cognitive Anxiety Sensitivity. \**p* < .001.

### Discussion

Cognitive fusion significantly mediated the relation of

# Limitations

Limited diversity in sample

Impact of rumination on functioning unclear

Cross-sectional self-report data

## **Future Directions**

### References

4. Kaiser, R. H., Snyder, H. R., Goer, F., Clegg, R., Ironside, M., & Pizzagalli, D. A. (2018). Attention Bias in Rumination and

7. Taylor, S., Zvolensky, M. J., Cox, B. J., Deacon, B., Heimberg, R. G., Ledley, D. R., Abramowitz, J. S., Holaway, R. M., Sandin, B., Stewart, S. H., Coles, M., Eng, W., Daly, E. S., Arrindell, W. A., Bouvard, M., & Cardenas, S. J. (2007). Robust dimensions of anxiety sensitivity: Development and initial validation of the Anxiety Sensitivity Index-3. Psychological Assessment, 19(2), 176-188. https://doi.org/10.1037/1040-3590.19.2.176

8. Gillanders, D. T., Bolderston, H., Bond, F. W., Dempster, M., Flaxman, P. E., Campbell, L., Kerr, S., Tansey, L., Noel, P., Ferenbach, C., Masley, S., Roach, L., Lloyd, L., May, L., Clarke, S., & Remington, B. (2014). The development and initial validation of the Cognitive Fusion Questionnaire. Behavior Therapy, 45(1), 83-101. https://doi.org/10.1016/j.beth.2013.09.001